

LISTING OF THE CLAIMS

This listing of claims replaces all prior versions, and listings of claims in the application:

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1. (Previously Presented) A magazine-based data cartridge library comprising: a cabinet; a shelf system, located within said cabinet, for supporting at least two data cartridge magazines and comprising at least one shelf; a drive that is located within said cabinet; a magazine transport device, located within said cabinet, for moving a data cartridge magazine within a portion of an interior space defined by said cabinet; a cartridge transport device, located within said cabinet, for moving a data cartridge between one of said data cartridge magazines and said drive; and an entry/exit port for conveying one of said data cartridge magazines between an environment that is exterior to said cabinet and said interior space; wherein said interior space is accessible to said magazine transport device so that said magazine transport device can move one of said data cartridge magazines between said interior space and said shelf of said shelf system.
2. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 1, wherein: said magazine transport device comprises: a magazine picker for displacing a data cartridge magazine towards and away from said entry/exit port; and an elevator for moving said magazine picker.
3. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 1, wherein: said entry/exit port comprises a data cartridge magazine orientation structure for inhibiting the loading of an incorrectly oriented data cartridge magazine.
4. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 1, wherein: said entry/exit port comprises a tray with a lateral cross-section that is asymmetrical

relative to a plane that vertically bisects said tray so as to inhibit the loading of an incorrectly oriented data cartridge magazine.

5. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 1, wherein: said entry/exit port comprises a tray; wherein said tray is comprised of a planar surface, a first side surface that is operatively attached to said planar surface, and a second side surface that is operatively attached to said planar surface and substantially parallel to said first side surface; wherein said first side surface has a first shape and said second side surface has a second shape that is different than said first shape; wherein said first and second shapes contribute to inhibiting the loading of an incorrectly oriented data cartridge magazine.

6. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 1, wherein: said entry/exit port comprises a tray; wherein said tray is comprised of a planar surface, a first surface that extends away from said planar surface, a second surface, and means for allowing said second surface to move between: (a) a first position that is in opposition to said first surface to prevent movement of a data cartridge magazine in a direction with a component transverse to said first and second surfaces, and (b) a second position that is not in opposition to said first surface so that a data cartridge magazine can be moved in a direction with a component transverse to said first and second surfaces.

7. (Previously Presented) The magazine-based data cartridge library, as claimed in claim 1, wherein: said entry/exit port comprises a tray; wherein said tray is comprised of a planar surface, a first end surface that is operatively connected to said planar surface and extends away from said planar surface, a second end surface, and means for allowing said second end surface to move between: (a) a first position that is in opposition to said first end surface to prevent movement of one of said data cartridge magazines in one of a plurality of directions with one of a plurality of components transverse to said first and second end surfaces, and (b) a second position that is not in opposition to said first

surface so that one of said data cartridge magazines can be moved in said one of a plurality of directions with said one of a plurality of components transverse to said first and second end surfaces.

8. (Previously Presented) The magazine magazine-based data cartridge library, as claimed in claim 7, wherein: said means for allowing comprises a spring for biasing said second end surface towards said first position.

9. (Previously Presented) The magazine magazine-based data cartridge library, as claimed in claim 7, wherein: said second end surface comprises a cam follower surface for contacting a cam to place said second end surface in said second position.

10. (Previously Presented) The magazine magazine-based data cartridge library, as claimed in claim 7, wherein: said second end surface comprises an axle engagement structure; and said means for allowing comprises an axle that is operatively attached to said axle engagement structure.

11. (Previously Presented) The magazine magazine-based data cartridge library, as claimed in claim 7, wherein: said tray is comprised of a first side surface and a second side surface that is substantially parallel to said first side surface; wherein said first and second side surfaces cooperate to prevent movement of one of said data cartridge magazines in said one of a plurality of directions with said one of a plurality of components that is transverse to said first and second surfaces.

12. (Withdrawn) A magazine-based data cartridge library comprising: a cabinet; a shelf system, located within said cabinet, for supporting at least two data cartridge magazines and comprising at least one shelf; a drive that is located within said cabinet; a magazine transport device, located within said cabinet, for moving a data cartridge magazine within a portion of an interior volume defined by said cabinet; a cartridge transport device,

located within said cabinet, for moving a data cartridge between a data cartridge magazine and said drive; and an entry/exit port for conveying a data cartridge magazine between an environment that is exterior to said cabinet and a space that is interior to said cabinet and that is accessible to said magazine transport device so that said magazine transport device can move a data cartridge magazine between said space and said shelf of said shelf system; wherein said entry/exit port comprises: a magazine holder; means for moving said magazine holder between: (a) a first position at which an operator can either readily associate a data cartridge magazine with said magazine holder or readily remove a data cartridge magazine from said magazine holder, and (b) a second position at which said magazine transport device can either associate a data cartridge magazine with said magazine holder or readily remove a data cartridge magazine from said magazine holder; and a door mechanism for exposing and unexposing said magazine holder.

13. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said magazine transport device comprises: a magazine picker for displacing a data cartridge magazine towards and away from said entry/exit port; and an elevator for moving said magazine picker.

14. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said magazine holder comprises a magazine tray for supporting an overlying data cartridge magazine.

15. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said means for moving comprises a motor and a lead screw.

16. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises an exterior door that is movable between an open position at which said magazine holder is exposed to an exterior environment and a closed position at which said magazine holder is not exposed to the exterior environment.

17. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 16, wherein: said door mechanism comprises a linkage for moving said exterior door between said open position and said closed position.

18. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 17, wherein: said linkage extends between said exterior door and an actuator.

19. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 17, wherein: said linkage extends between said exterior door and said means for moving.

20. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 17, wherein: said linkage contributing to moving said exterior door between said open position and said closed position during a time when said magazine holder is moving between said first position and said second position.

21. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises an interior door that is moveable between a closed position at which said magazine holder is not accessible to said magazine transport device and an a open position at which said magazine holder is accessible to said magazine transport device.

22. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 21, wherein: said door mechanism comprises a linkage for moving said interior door between said open position and said closed position.

23. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 22, wherein: said linkage extends between said interior door and an actuator.

24. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 22, wherein: said linkage extends between said interior door and said means for moving.

25. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 22, wherein: said linkage contributing to moving said interior door between said open position and said closed position during a time when said magazine holder is moving between said second position and said first position.

26. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises: an exterior door that is movable between an exterior door open position at which said magazine holder is exposed to the exterior environment and an exterior door closed position at which said magazine holder is not exposed to the exterior environment; and an interior door that is moveable between an interior door closed position at which said magazine holder is not accessible to said magazine transport device and an interior door open position at which said magazine holder is accessible to said magazine transport device.

27. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 26, wherein: said door mechanism comprises: an exterior door linkage for moving said exterior door between said exterior door open position and said exterior door closed position; and an interior door linkage for moving said interior door between said interior door open position and said interior door closed position.

28. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 27, wherein: said exterior door linkage extends between said exterior door and an exterior door actuator; and said interior door linkage extends between said interior door and an interior door actuator.

29. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 27,

wherein: said exterior door linkage extends between said exterior door and said means for moving; and said interior door linkage extends between said interior door and said means for moving.

30. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 26, wherein: said door mechanism comprises means for coordinating the movements of said exterior door and said interior door such that: (a) during a time that said exterior door is moving between said exterior door open position and said exterior door closed position, said interior door is moving between said interior door closed position and said interior door open position, and (b) during a time that said exterior door is moving between said exterior door closed position and said exterior door open position, said interior door is moving between said interior door open position and said interior door closed position.

31. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 30, wherein: said means for coordinating comprises a linkage that extends between said exterior door and said interior door.

32. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 31, wherein: said linkage extends to an actuator.

33. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 31, wherein: said linkage extends to said means for moving.

34. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 26, wherein: said door mechanism comprises means for coordinating the movements of said exterior door and said interior door such that: (a) during a time that said magazine holder is moving between said first position and said second position, said exterior door is moving between said exterior door open position and said exterior door closed position and said interior door is moving between said interior door closed position and said

interior door open position, and (b) during a time that said magazine holder is moving between said second position and said first position, said exterior door is moving between said exterior door closed position and said exterior door open position and said interior door is moving between said interior door open position and said interior door closed position.

35. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises: a door that lies in a plane; and a linkage that operates to rotate said door about an axis that is substantially parallel to said plane.

36. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises: a first door that lies in a first plane; a first linkage that operates to rotate said first door about a first axis that is substantially parallel to said first plane; a second door that lies in a second plane; and a second linkage that operates to rotate said second door about a second axis that is substantially parallel to said second plane.

37. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 36, wherein: said door mechanism comprises: means for causing said first door to rotate between a first door open position and a first door closed position and said second door to rotate between a second door open position and a second door closed position.

38. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 36, wherein: said door mechanism comprises: means for coordinating the movements of said first door and said second door such that: (a) during a time that said first door is rotating between said first door open position and said first door closed position, said second door is rotating between said second door closed position and said second door open position, and (b) during a time that said first door is rotating between said first door closed position and said first door open position, said second door is rotating between said second door

open position and said second door closed position.

39. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 36, wherein: said door mechanism comprises: means for coordinating the movements of said first door and said second door such that: (a) during a time that said magazine holder is moving between said first position and said second position, said first door is rotating between said first door open position and said first door closed position and said second door is rotating between said second door closed position and said second door open position, and (b) during a time that said magazine holder is moving between said second position and said first position, said first door is rotating between said first door closed position and said first door open position and said second door is rotating between said second door open position and said second door closed position.

40. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises: a door that lies in a plane; and a guide structure that constrains said door to move in said plane.

41. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 40, wherein: said guide structure constrains said door to translate within said plane.

42. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 40, wherein: said guide structure constrains said door to rotate within said plane.

43. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 12, wherein: said door mechanism comprises: a first door that lies in a first plane; a first guide structure that constrains said first door to move in said first plane; a second door that lies in a second plane; and a second guide structure that constrains said second door to move in said second plane.

44. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 43, wherein: said first guide structure constrains said first door to translate within said first plane; and said second guide structure constrains said second door to translate within said second plane.

45. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 43, wherein: said door mechanism comprises: means for causing said first door to move between a first door open position and a first door closed position and said second door to move between a second door open position and a second door closed position.

46. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 43, wherein: said door mechanism comprises: means for coordinating the movements of said first door and said second door such that: (a) during a time that said first door is moving between said first door open position and said first door closed position, said second door is moving between said second door closed position and said second door open position, and (b) during a time that said first door is moving between said first door closed position and said first door open position, said second door is moving between said second door open position and said second door closed position.

47. (Withdrawn) A magazine-based data cartridge library, as claimed in claim 43, wherein: said door mechanism comprises: means for coordinating the movements of said first door and said second door such that: (a) during a time that said magazine holder is moving between said first position and said second position, said first door is moving between said first door open position and said first door closed position and said second door is moving between said second door closed position and said second door open position, and (b) during a time that said magazine holder is moving between said second position and said first position, said first door is moving between said first door closed position and said first door open position and said second door is moving between said second door open position and said second door closed position.

48. (Withdrawn) With respect to a magazine-based data cartridge library magazine that comprises a cabinet and a magazine transport device located within the cabinet, a method for moving a magazine holder between an environment that is exterior to the cabinet and a space that is interior to the cabinet and accessible to the magazine transport device, the method comprising: providing an entry/exit port for conveying a data cartridge magazine between an environment that is exterior to the cabinet and a space that is interior to the cabinet; wherein said entry/exit port comprises a magazine holder for supporting a data cartridge magazine; placing said magazine holder in one of a first position and a second position; wherein when said magazine holder is at said first position, an operator is either readily able to associate a data cartridge magazine with said magazine holder or readily able to remove a data cartridge magazine from said magazine holder; wherein when said magazine holder is at said second position, a magazine transport device is either readily able to associate a data cartridge magazine with said magazine holder or readily able to remove a data cartridge magazine from said magazine holder; and moving said magazine holder between said first position and said second position.

49. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises translating said magazine holder.

50. (Withdrawn) A method, as claimed in claim 48, wherein: said step for moving comprises rotating said magazine holder.

51. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises rotating a door that lies in a plane about an axis that is substantially parallel to said plane.

52. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises rotating a door that lies in a plane about an axis that is substantially

perpendicular to said plane.

53. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises translating a door that lies in a plane within said plane.

54. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises coordinating the movement of an exterior door and an interior door so that: (a) during a time that said exterior door is moving between an exterior door open position at which said magazine holder is exposed to the exterior environment and an exterior door closed position at which said magazine holder is not exposed to the exterior environment, said interior door is moving between an interior door closed position at which said magazine holder is not accessible to said magazine transport device and an interior door open position at which said magazine holder is accessible to said magazine transport device; and (b) during a time that said exterior door is moving between said exterior door closed position and said exterior door open position, said interior door is moving between said interior door open position and said interior door closed position.

55. (Withdrawn) A method, as claimed in claim 48, wherein: said step of moving comprises coordinating the movement of an exterior door and an interior door so that: (a) during a time that said magazine holder is moving between said first position and said second position, said exterior door is moving between an exterior door open position at which said magazine holder is exposed to the exterior environment and an exterior door closed position at which said magazine holder is not exposed to the exterior environment, and said interior door is moving between an interior door closed position at which said magazine holder is not accessible to said magazine transport device and an interior door open position at which said magazine holder is accessible to said magazine transport device; and (b) during a time that said magazine holder is moving between said second position and said first position, said exterior door is moving between said exterior door

closed position and said exterior door open position, said interior door is moving between said interior door open position and said interior door closed position.

56. (Previously Presented) A magazine-based data cartridge library comprising:

- a cabinet defining an interior space;
- a shelf system in said interior space adapted to support at least a first and second data cartridge magazine;
- at least a first drive in said interior space adapted to read and write data on a data cartridge;
- a magazine transport device capable of transporting within said interior space one of said magazines from said shelf system to a position for a cartridge transport to move at least one data cartridge from said data cartridge magazine to a cooperating relationship with said first drive; and
- an entry/exit port capable of receiving one of said magazines from outside said interior space wherein said magazine transport device is capable of moving said magazine within said interior space to said shelf system.

57. (Previously Presented) The magazine-based data cartridge library of claim 56 wherein said magazine transport device is robotic.

58. (Previously Presented) A magazine-based data cartridge library comprising:

- a cabinet defining an interior space;
- a shelf system adapted to support at least a first and second data cartridge magazine, each of said data cartridge magazines supporting at least one corresponding data cartridge;
- at least a first drive adapted to read and write data to and from at least one of said data cartridges;

an entry/exit port capable of receiving one of said magazines into said interior space from outside said interior space wherein said magazine is movable within said interior space; and a magazine transport device, confined to said interior space and adapted to move one of said magazines received by said entry/exit port within said interior space either to said shelf system or to a location in proximity to said drive, said location is other than said shelf system, whereby at least one of said data cartridges corresponding to said and supported by said one of said magazines received by said entry/exit port is made available for use by said drive.